

SAFETY DATA SHEET



GenetiSure Pre-Screen Amplification and Labeling Kit, Part Number 5190-7731

Section 1. Identification

Product identifier	: GenetiSure Pre-Screen Amplification and Labeling Kit, Part Number 5190-7731		
Part No. (Chemical Kit)	: 5190-7731		
Part No.			
	• Nuclease Free Water		5190-7760
	Random Primers		5190-0441
	5X gDNA Reaction Buffer		5190-3387
	Exo(-) Klenow		5190-0437
	10X dNTP Mix		5190-3388
	Cyanine-3-dUTP		5190-3389
	Cyanine-5-dUTP		5190-3390
	Buffer DLB		5190-7720
	DTT		5190-7721
	Stop Solution		5190-7722
	Amplification Reaction Buffer		5190-7723
	Amplification DNA Polymerase		5190-7724
	PBS		5190-7761

Relevant identified uses of the substance or mixture and uses advised against

• Analytical reagent.	
• Nuclease Free Water	1.5 ml
Random Primers	0.265 ml
5X gDNA Reaction Buffer	0.55 ml
Exo(-) Klenow	0.055 ml
10X dNTP Mix	0.265 ml
Cyanine-3-dUTP	0.078 ml
Cyanine-5-dUTP	0.078 ml
Buffer DLB	<1 mg
DTT	1 ml
Stop Solution	1.8 ml
Amplification Reaction Buffer	0.7 ml
Amplification DNA Polymerase	0.048 ml
PBS	1.5 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Buffer DLB	
H302	ACUTE TOXICITY (oral) - Category 4
H314	SKIN CORROSION/IRRITATION - Category 1
H318	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
DTT	
H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
H335	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract)

Section 2. Hazard(s) identification

H402 irritation) - Category 3
 H412 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 3
 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

Amplification Reaction Buffer

H315 SKIN CORROSION/IRRITATION - Category 2
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

5X gDNA Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
Exo(-) Klenow	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
DTT	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 10 - 30%
	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
Amplification Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
5X gDNA Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 3.2%

GHS label elements

Hazard pictograms

: Buffer DLB	
DTT	
Amplification Reaction Buffer	

Signal word

: Nuclease Free Water	No signal word.
Random Primers	No signal word.
5X gDNA Reaction Buffer	No signal word.
Exo(-) Klenow	No signal word.
10X dNTP Mix	No signal word.
Cyanine-3-dUTP	No signal word.
Cyanine-5-dUTP	No signal word.
Buffer DLB	DANGER
DTT	WARNING
Stop Solution	No signal word.
Amplification Reaction Buffer	WARNING
Amplification DNA	No signal word.
Polymerase	
PBS	No signal word.

Section 2. Hazard(s) identification

Hazard statements	: <input checked="" type="checkbox"/> Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Exo(-) Klenow 10X dNTP Mix Cyanine-3-dUTP Cyanine-5-dUTP Buffer DLB DTT Stop Solution Amplification Reaction Buffer Amplification DNA Polymerase PBS	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. H302 - Harmful if swallowed. H314 - Causes severe skin burns and eye damage. H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H335 - May cause respiratory irritation. H412 - Harmful to aquatic life with long lasting effects. No known significant effects or critical hazards. H319 - Causes serious eye irritation. H315 - Causes skin irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
Precautionary statements		
Prevention	: <input checked="" type="checkbox"/> Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Exo(-) Klenow 10X dNTP Mix Cyanine-3-dUTP Cyanine-5-dUTP Buffer DLB DTT Stop Solution Amplification Reaction Buffer Amplification DNA Polymerase PBS	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves. Wear eye or face protection. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P264 - Wash hands thoroughly after handling. Not applicable.
Response	: <input checked="" type="checkbox"/> Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Exo(-) Klenow 10X dNTP Mix Cyanine-3-dUTP Cyanine-5-dUTP Buffer DLB	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.

Section 2. Hazard(s) identification

		P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
		P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
	DTT	P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
		P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
		P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
		P332 + P313 - If skin irritation occurs: Get medical attention.
		P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P337 + P313 - If eye irritation persists: Get medical attention.
	Stop Solution	Not applicable.
	Amplification Reaction Buffer	P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
		P332 + P313 - If skin irritation occurs: Get medical attention.
		P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P337 + P313 - If eye irritation persists: Get medical attention.
	Amplification DNA Polymerase	Not applicable.
	PBS	Not applicable.
Storage	: Nuclease Free Water	Not applicable.
	Random Primers	Not applicable.
	5X gDNA Reaction Buffer	Not applicable.
	Exo(-) Klenow	Not applicable.
	10X dNTP Mix	Not applicable.
	Cyanine-3-dUTP	Not applicable.
	Cyanine-5-dUTP	Not applicable.
	Buffer DLB	P405 - Store locked up.
	DTT	P405 - Store locked up.
	Stop Solution	Not applicable.
	Amplification Reaction Buffer	Not applicable.
	Amplification DNA Polymerase	Not applicable.
	PBS	Not applicable.
Disposal	: Nuclease Free Water	Not applicable.
	Random Primers	Not applicable.
	5X gDNA Reaction Buffer	Not applicable.
	Exo(-) Klenow	Not applicable.
	10X dNTP Mix	Not applicable.
	Cyanine-3-dUTP	Not applicable.
	Cyanine-5-dUTP	Not applicable.

Section 2. Hazard(s) identification

	Buffer DLB	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	DTT	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Stop Solution	Not applicable.
	Amplification Reaction Buffer	Not applicable.
	Amplification DNA	Not applicable.
	Polymerase	
	PBS	Not applicable.
Supplemental label elements	: <input checked="" type="checkbox"/> Nuclease Free Water	Not applicable.
	Random Primers	Not applicable.
	5X gDNA Reaction Buffer	Not applicable.
	Exo(-) Klenow	Not applicable.
	10X dNTP Mix	Not applicable.
	Cyanine-3-dUTP	Not applicable.
	Cyanine-5-dUTP	Not applicable.
	Buffer DLB	Not applicable.
	DTT	Not applicable.
	Stop Solution	Not applicable.
	Amplification Reaction Buffer	Not applicable.
	Amplification DNA	Not applicable.
	Polymerase	
	PBS	Not applicable.
Other hazards which do not result in classification	: <input checked="" type="checkbox"/> Nuclease Free Water	None known.
	Random Primers	None known.
	5X gDNA Reaction Buffer	None known.
	Exo(-) Klenow	None known.
	10X dNTP Mix	None known.
	Cyanine-3-dUTP	None known.
	Cyanine-5-dUTP	None known.
	Buffer DLB	Causes digestive tract burns.
	DTT	None known.
	Stop Solution	None known.
	Amplification Reaction Buffer	None known.
	Amplification DNA	None known.
	Polymerase	
	PBS	None known.

Section 3. Composition and ingredient information

Substance/mixture	: <input checked="" type="checkbox"/> Nuclease Free Water	Substance
	Random Primers	Mixture
	5X gDNA Reaction Buffer	Mixture
	Exo(-) Klenow	Mixture
	10X dNTP Mix	Mixture
	Cyanine-3-dUTP	Mixture
	Cyanine-5-dUTP	Mixture
	Buffer DLB	Mixture
	DTT	Mixture
	Stop Solution	Mixture
	Amplification Reaction Buffer	Mixture
	Amplification DNA	Mixture
	Polymerase	
	PBS	Mixture

CAS number/other identifiers

Section 3. Composition and ingredient information

Ingredient name	% (w/w)	CAS number
Nuclease Free Water Nuclease Free water	100	7732-18-5
Exo(-) Klenow Glycerol	≥30 - ≤60	56-81-5
Buffer DLB Potassium hydroxide	≥90	1310-58-3
DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	≥10 - ≤30	3483-12-3
Amplification Reaction Buffer Trometamol	≥10 - <20	77-86-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Nuclease Free Water	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Random Primers	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	5X gDNA Reaction Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Exo(-) Klenow	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	10X dNTP Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Cyanine-3-dUTP	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Cyanine-5-dUTP	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Buffer DLB	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
	DTT	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue

Section 4. First aid measures

	Stop Solution	to rinse for at least 10 minutes. Get medical attention. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Amplification Reaction Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	Amplification DNA Polymerase	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	PBS	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Nuclease Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Random Primers	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	5X gDNA Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Exo(-) Klenow	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10X dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Cyanine-3-dUTP	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Cyanine-5-dUTP	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Buffer DLB	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	DTT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or

Section 4. First aid measures

if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Stop Solution

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Amplification Reaction Buffer

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Amplification DNA Polymerase

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

PBS

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact

: Nuclease Free Water

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Random Primers

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

5X gDNA Reaction Buffer

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Exo(-) Klenow

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

10X dNTP Mix

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Cyanine-3-dUTP

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Cyanine-5-dUTP

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Buffer DLB

Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. Flush contaminated skin with plenty of water.

DTT

Section 4. First aid measures

		Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Stop Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Amplification Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Amplification DNA Polymerase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	PBS	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Nuclease Free Water	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Random Primers	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	5X gDNA Reaction Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Exo(-) Klenow	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	10X dNTP Mix	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Cyanine-3-dUTP	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Cyanine-5-dUTP	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the

Section 4. First aid measures

Buffer DLB	<p>exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p> <p>Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
DTT	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Stop Solution	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Amplification Reaction Buffer	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Amplification DNA Polymerase	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the</p>

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PBS

exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: Nuclease Free Water	No known significant effects or critical hazards.
Random Primers	No known significant effects or critical hazards.
5X gDNA Reaction Buffer	No known significant effects or critical hazards.
Exo(-) Klenow	No known significant effects or critical hazards.
10X dNTP Mix	No known significant effects or critical hazards.
Cyanine-3-dUTP	No known significant effects or critical hazards.
Cyanine-5-dUTP	No known significant effects or critical hazards.
Buffer DLB	Causes serious eye damage.
DTT	Causes serious eye irritation.
Stop Solution	No known significant effects or critical hazards.
Amplification Reaction Buffer	Causes serious eye irritation.
Amplification DNA	No known significant effects or critical hazards.
Polymerase	
PBS	No known significant effects or critical hazards.

Inhalation

: Nuclease Free Water	No known significant effects or critical hazards.
Random Primers	No known significant effects or critical hazards.
5X gDNA Reaction Buffer	No known significant effects or critical hazards.
Exo(-) Klenow	No known significant effects or critical hazards.
10X dNTP Mix	No known significant effects or critical hazards.
Cyanine-3-dUTP	No known significant effects or critical hazards.
Cyanine-5-dUTP	No known significant effects or critical hazards.
Buffer DLB	No known significant effects or critical hazards.
DTT	May cause respiratory irritation.
Stop Solution	No known significant effects or critical hazards.
Amplification Reaction Buffer	No known significant effects or critical hazards.
Amplification DNA	No known significant effects or critical hazards.
Polymerase	
PBS	No known significant effects or critical hazards.

Skin contact

: Nuclease Free Water	No known significant effects or critical hazards.
Random Primers	No known significant effects or critical hazards.
5X gDNA Reaction Buffer	No known significant effects or critical hazards.
Exo(-) Klenow	No known significant effects or critical hazards.
10X dNTP Mix	No known significant effects or critical hazards.
Cyanine-3-dUTP	No known significant effects or critical hazards.
Cyanine-5-dUTP	No known significant effects or critical hazards.
Buffer DLB	Causes severe burns.
DTT	Causes skin irritation.
Stop Solution	No known significant effects or critical hazards.
Amplification Reaction Buffer	Causes skin irritation.
Amplification DNA	No known significant effects or critical hazards.
Polymerase	
PBS	No known significant effects or critical hazards.

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Ingestion	:	<input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
		DTT	Harmful if swallowed.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA Polymerase	No known significant effects or critical hazards.
		PBS	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	<input checked="" type="checkbox"/> Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Exo(-) Klenow	No specific data.
		10X dNTP Mix	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
		Buffer DLB	Adverse symptoms may include the following: pain watering redness
		DTT	Adverse symptoms may include the following: pain or irritation watering redness
		Stop Solution	No specific data.
		Amplification Reaction Buffer	Adverse symptoms may include the following: pain or irritation watering redness
		Amplification DNA Polymerase PBS	No specific data.
		Inhalation	:
Random Primers	No specific data.		
5X gDNA Reaction Buffer	No specific data.		
Exo(-) Klenow	No specific data.		
10X dNTP Mix	No specific data.		
Cyanine-3-dUTP	No specific data.		
Cyanine-5-dUTP	No specific data.		
Buffer DLB	No specific data.		
DTT	Adverse symptoms may include the following: respiratory tract irritation coughing		
Stop Solution	No specific data.		
Amplification Reaction Buffer	No specific data.		
Amplification DNA Polymerase PBS	No specific data.		

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Skin contact	:	Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Exo(-) Klenow	No specific data.
		10X dNTP Mix	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
		Buffer DLB	Adverse symptoms may include the following: pain or irritation redness blistering may occur
		DTT	Adverse symptoms may include the following: irritation redness
		Stop Solution	No specific data.
		Amplification Reaction Buffer	Adverse symptoms may include the following: irritation redness
		Amplification DNA Polymerase PBS	No specific data. No specific data.
	Ingestion	:	Nuclease Free Water
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Exo(-) Klenow	No specific data.
		10X dNTP Mix	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
		Buffer DLB	Adverse symptoms may include the following: stomach pains
		DTT	No specific data.
		Stop Solution	No specific data.
		Amplification Reaction Buffer	No specific data.
		Amplification DNA Polymerase PBS	No specific data. No specific data. No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	:	Nuclease Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Random Primers	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		5X gDNA Reaction Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		Exo(-) Klenow	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		10X dNTP Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Cyanine-3-dUTP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Cyanine-5-dUTP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Buffer DLB	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed

Section 4. First aid measures

person may need to be kept under medical surveillance for 48 hours.

DTT
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Stop Solution
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Amplification Reaction Buffer
In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Amplification DNA Polymerase
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

PBS
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments

: Nuclease Free Water No specific treatment.
 Random Primers No specific treatment.
 5X gDNA Reaction Buffer No specific treatment.
 Exo(-) Klenow No specific treatment.
 10X dNTP Mix No specific treatment.
 Cyanine-3-dUTP No specific treatment.
 Cyanine-5-dUTP No specific treatment.
 Buffer DLB No specific treatment.
 DTT No specific treatment.
 Stop Solution No specific treatment.
 Amplification Reaction Buffer No specific treatment.
 Amplification DNA Polymerase No specific treatment.
 PBS No specific treatment.

Protection of first-aiders

: Nuclease Free Water No action shall be taken involving any personal risk or without suitable training.
 Random Primers No action shall be taken involving any personal risk or without suitable training.
 5X gDNA Reaction Buffer No action shall be taken involving any personal risk or without suitable training.
 Exo(-) Klenow No action shall be taken involving any personal risk or without suitable training.
 10X dNTP Mix No action shall be taken involving any personal risk or without suitable training.
 Cyanine-3-dUTP No action shall be taken involving any personal risk or without suitable training.
 Cyanine-5-dUTP No action shall be taken involving any personal risk or without suitable training.
 Buffer DLB No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
 DTT No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
 Stop Solution No action shall be taken involving any personal risk or without suitable training.
 Amplification Reaction Buffer No action shall be taken involving any personal risk

Section 4. First aid measures

Amplification DNA
Polymerase
PBS

or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
No action shall be taken involving any personal risk or without suitable training.
No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media

: <input checked="" type="checkbox"/> Nuclease Free Water	Use an extinguishing agent suitable for the surrounding fire.
Random Primers	Use an extinguishing agent suitable for the surrounding fire.
5X gDNA Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
Exo(-) Klenow	Use an extinguishing agent suitable for the surrounding fire.
10X dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
Cyanine-3-dUTP	Use an extinguishing agent suitable for the surrounding fire.
Cyanine-5-dUTP	Use an extinguishing agent suitable for the surrounding fire.
Buffer DLB	Use an extinguishing agent suitable for the surrounding fire.
DTT	Use an extinguishing agent suitable for the surrounding fire.
Stop Solution	Use an extinguishing agent suitable for the surrounding fire.
Amplification Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
Amplification DNA Polymerase PBS	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: <input checked="" type="checkbox"/> Nuclease Free Water	None known.
Random Primers	None known.
5X gDNA Reaction Buffer	None known.
Exo(-) Klenow	None known.
10X dNTP Mix	None known.
Cyanine-3-dUTP	None known.
Cyanine-5-dUTP	None known.
Buffer DLB	None known.
DTT	None known.
Stop Solution	None known.
Amplification Reaction Buffer	None known.
Amplification DNA Polymerase PBS	None known. None known.

Specific hazards arising from the chemical

: <input checked="" type="checkbox"/> Nuclease Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
Random Primers	In a fire or if heated, a pressure increase will occur and the container may burst.
5X gDNA Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Exo(-) Klenow	In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Firefighting measures

	10X dNTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	Cyanine-3-dUTP	In a fire or if heated, a pressure increase will occur and the container may burst.
	Cyanine-5-dUTP	In a fire or if heated, a pressure increase will occur and the container may burst.
	Buffer DLB	No specific fire or explosion hazard.
	DTT	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	Stop Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	Amplification Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Amplification DNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
	PBS	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
	Exo(-) Klenow	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X dNTP Mix	No specific data.
	Cyanine-3-dUTP	No specific data.
	Cyanine-5-dUTP	No specific data.
	Buffer DLB	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides
	DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	Stop Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Amplification Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	Amplification DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	PBS	Decomposition products may include the following materials: carbon dioxide

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carbon monoxide
phosphorus oxides
metal oxide/oxides

Special protective actions for fire-fighters	: <input checked="" type="checkbox"/> Nuclease Free Water	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Random Primers	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	5X gDNA Reaction Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Exo(-) Klenow	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	10X dNTP Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Cyanine-3-dUTP	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Cyanine-5-dUTP	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Buffer DLB	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	DTT	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Stop Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Amplification Reaction Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Amplification DNA Polymerase	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	PBS	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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Special protective equipment for fire-fighters	:	Nuclease Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Random Primers	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		5X gDNA Reaction Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Exo(-) Klenow	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		10X dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Cyanine-3-dUTP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Cyanine-5-dUTP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Buffer DLB	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		DTT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Stop Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Amplification Reaction Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Amplification DNA Polymerase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		PBS	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Hazchem code	:	Nuclease Free Water
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Exo(-) Klenow	Not available.
		10X dNTP Mix	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Buffer DLB	2W
		DTT	Not available.
		Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.	

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Amplification DNA Polymerase	Not available.
PBS	Not available.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Nuclease Free Water	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Random Primers	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
5X gDNA Reaction Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Exo(-) Klenow	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
10X dNTP Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Cyanine-3-dUTP	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Cyanine-5-dUTP	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Buffer DLB	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
DTT	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate

Section 6. Accidental release measures

Stop Solution	respirator when ventilation is inadequate. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Amplification Reaction Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Amplification DNA Polymerase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
PBS	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders : Nuclease Free Water	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Random Primers	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
5X gDNA Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Exo(-) Klenow	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
10X dNTP Mix	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Cyanine-3-dUTP	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Cyanine-5-dUTP	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Buffer DLB	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
DTT	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the

Section 6. Accidental release measures

Stop Solution	information in "For non-emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Amplification Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Amplification DNA Polymerase	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
PBS	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions	:	Nuclease Free Water	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Random Primers	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		5X gDNA Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Exo(-) Klenow	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		10X dNTP Mix	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Cyanine-3-dUTP	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Cyanine-5-dUTP	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Buffer DLB	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		DTT	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful

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Stop Solution	to the environment if released in large quantities. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Amplification Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Amplification DNA Polymerase	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
PBS	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up :  Nuclelease Free Water

Random Primers	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
5X gDNA Reaction Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Exo(-) Klenow	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
10X dNTP Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Cyanine-3-dUTP	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Cyanine-5-dUTP	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an

Section 6. Accidental release measures


	inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Buffer DLB	Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
DTT	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Stop Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Amplification Reaction Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Amplification DNA Polymerase	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
PBS	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

[Precautions for safe handling](#)

Protective measures	:	<ul style="list-style-type: none"> ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Exo(-) Klenow 10X dNTP Mix Cyanine-3-dUTP Cyanine-5-dUTP Buffer DLB 	<ul style="list-style-type: none"> Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept
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Section 7. Handling and storage

		tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	DTT	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Stop Solution	Put on appropriate personal protective equipment (see Section 8).
	Amplification Reaction Buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Amplification DNA Polymerase	Put on appropriate personal protective equipment (see Section 8).
	PBS	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:  Nuclease Free Water	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Random Primers	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	5X gDNA Reaction Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Exo(-) Klenow	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	10X dNTP Mix	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Cyanine-3-dUTP	Eating, drinking and smoking should be prohibited in

Section 7. Handling and storage

	areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Cyanine-5-dUTP	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Buffer DLB	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
DTT	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Stop Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Amplification Reaction Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Amplification DNA Polymerase	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
PBS	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Nuclease Free Water

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to

Section 7. Handling and storage

Random Primers	prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
5X gDNA Reaction Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Exo(-) Klenow	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
10X dNTP Mix	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Cyanine-3-dUTP	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Cyanine-5-dUTP	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until

Section 7. Handling and storage

Buffer DLB	ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
DTT	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Stop Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Amplification Reaction Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Amplification DNA Polymerase	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
PBS	Store in accordance with local regulations. Store in original container protected from direct sunlight in a

Section 7. Handling and storage

dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Exo(-) Klenow Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.
Buffer DLB Potassium hydroxide	Safe Work Australia (Australia, 1/2014). TWA: 2 mg/m ³ 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls and personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state :

Nuclease Free Water	Liquid.
Random Primers	Liquid.
5X gDNA Reaction Buffer	Liquid.
Exo(-) Klenow	Liquid.
10X dNTP Mix	Liquid.
Cyanine-3-dUTP	Liquid.
Cyanine-5-dUTP	Liquid.
Buffer DLB	Solid.
DTT	Liquid. [Fluid.]
Stop Solution	Liquid.
Amplification Reaction Buffer	Liquid. [Fluid.]
Amplification DNA	Liquid.
Polymerase	
PBS	Liquid.

Colour :

Nuclease Free Water	Colourless.
Random Primers	Not available.
5X gDNA Reaction Buffer	Not available.
Exo(-) Klenow	Not available.
10X dNTP Mix	Not available.
Cyanine-3-dUTP	Not available.
Cyanine-5-dUTP	Not available.
Buffer DLB	White.
DTT	Clear.
Stop Solution	Not available.
Amplification Reaction Buffer	Not available.
Amplification DNA	Not available.
Polymerase	
PBS	Not available.

Odour :

Nuclease Free Water	Odourless.
Random Primers	Not available.
5X gDNA Reaction Buffer	Not available.
Exo(-) Klenow	Not available.
10X dNTP Mix	Not available.
Cyanine-3-dUTP	Not available.
Cyanine-5-dUTP	Not available.
Buffer DLB	Characteristic.
DTT	Characteristic.
Stop Solution	Not available.
Amplification Reaction Buffer	Characteristic.
Amplification DNA	Not available.
Polymerase	
PBS	Not available.

Odour threshold :

Nuclease Free Water	Not available.
Random Primers	Not available.
5X gDNA Reaction Buffer	Not available.
Exo(-) Klenow	Not available.
10X dNTP Mix	Not available.
Cyanine-3-dUTP	Not available.
Cyanine-5-dUTP	Not available.
Buffer DLB	Not available.
DTT	Not available.
Stop Solution	Not available.
Amplification Reaction Buffer	Not available.
Amplification DNA	Not available.
Polymerase	

Section 9. Physical and chemical properties

	PBS	Not available.
pH	: Nuclease Free Water	7
	Random Primers	8
	5X gDNA Reaction Buffer	7.5
	Exo(-) Klenow	7.5
	10X dNTP Mix	8
	Cyanine-3-dUTP	7.6
	Cyanine-5-dUTP	7.6
	Buffer DLB	14
	DTT	Not available.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.
	Amplification DNA	Not available.
	Polymerase	
Melting point	PBS	Not available.
	: Nuclease Free Water	0°C (32°F)
	Random Primers	0°C (32°F)
	5X gDNA Reaction Buffer	0°C (32°F)
	Exo(-) Klenow	Not available.
	10X dNTP Mix	0°C (32°F)
	Cyanine-3-dUTP	0°C (32°F)
	Cyanine-5-dUTP	0°C (32°F)
	Buffer DLB	Not available.
	DTT	Not available.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.
	Amplification DNA	Not available.
Polymerase		
Boiling point	PBS	Not available.
	: Nuclease Free Water	100°C (212°F)
	Random Primers	100°C (212°F)
	5X gDNA Reaction Buffer	100°C (212°F)
	Exo(-) Klenow	Not available.
	10X dNTP Mix	100°C (212°F)
	Cyanine-3-dUTP	100°C (212°F)
	Cyanine-5-dUTP	100°C (212°F)
	Buffer DLB	Not available.
	DTT	Not available.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.
	Amplification DNA	Not available.
Polymerase		
Flash point	PBS	Not available.
	: Nuclease Free Water	Not applicable.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	Exo(-) Klenow	Not available.
	10X dNTP Mix	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
	Buffer DLB	Not available.
	DTT	Not available.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.
	Amplification DNA	Not available.
Polymerase		
PBS	Not available.	

Section 9. Physical and chemical properties

Evaporation rate	:	<input checked="" type="checkbox"/> Nuclease Free Water	Not available.
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Exo(-) Klenow	Not available.
		10X dNTP Mix	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Buffer DLB	Not available.
		DTT	Not available.
		Stop Solution	Not available.
		Amplification Reaction Buffer	Not available.
		Amplification DNA	Not available.
		Polymerase	
		PBS	Not available.
Flammability (solid, gas)	:	<input checked="" type="checkbox"/> Nuclease Free Water	Not applicable.
		Random Primers	Not applicable.
		5X gDNA Reaction Buffer	Not applicable.
		Exo(-) Klenow	Not applicable.
		10X dNTP Mix	Not applicable.
		Cyanine-3-dUTP	Not applicable.
		Cyanine-5-dUTP	Not applicable.
		Buffer DLB	Not available.
		DTT	Not applicable.
		Stop Solution	Not applicable.
		Amplification Reaction Buffer	Not applicable.
		Amplification DNA	Not applicable.
		Polymerase	
		PBS	Not applicable.
Lower and upper explosive (flammable) limits	:	<input checked="" type="checkbox"/> Nuclease Free Water	Not available.
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Exo(-) Klenow	Not available.
		10X dNTP Mix	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Buffer DLB	Not available.
		DTT	Not available.
		Stop Solution	Not available.
		Amplification Reaction Buffer	Not available.
		Amplification DNA	Not available.
		Polymerase	
		PBS	Not available.
Vapour pressure	:	<input checked="" type="checkbox"/> Nuclease Free Water	3.2 kPa (23.8 mm Hg) [room temperature]
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Exo(-) Klenow	Not available.
		10X dNTP Mix	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Buffer DLB	Not available.
		DTT	Not available.
		Stop Solution	Not available.
		Amplification Reaction Buffer	Not available.
		Amplification DNA	Not available.
		Polymerase	
		PBS	Not available.
Vapour density	:		

Section 9. Physical and chemical properties

	☑	Nuclease Free Water	0.62 [Air = 1]
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Exo(-) Klenow	Not available.
		10X dNTP Mix	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Buffer DLB	Not available.
		DTT	Not available.
		Stop Solution	Not available.
		Amplification Reaction Buffer	Not available.
		Amplification DNA	Not available.
		Polymerase	
		PBS	Not available.
Relative density	:	☑ Nuclease Free Water	1
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Exo(-) Klenow	Not available.
		10X dNTP Mix	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Buffer DLB	Not available.
		DTT	Not available.
		Stop Solution	Not available.
		Amplification Reaction Buffer	Not available.
		Amplification DNA	Not available.
		Polymerase	
		PBS	Not available.
Solubility	:	☑ Nuclease Free Water	Easily soluble in the following materials: cold water and hot water.
		Random Primers	Easily soluble in the following materials: cold water and hot water.
		5X gDNA Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
		Exo(-) Klenow	Soluble in the following materials: cold water and hot water.
		10X dNTP Mix	Easily soluble in the following materials: cold water and hot water.
		Cyanine-3-dUTP	Easily soluble in the following materials: cold water and hot water.
		Cyanine-5-dUTP	Easily soluble in the following materials: cold water and hot water.
		Buffer DLB	Easily soluble in the following materials: cold water and hot water.
		DTT	Easily soluble in the following materials: cold water and hot water.
		Stop Solution	Not available.
		Amplification Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
		Amplification DNA	Not available.
		Polymerase	
		PBS	Not available.
Partition coefficient: n-octanol/water	:	☑ Nuclease Free Water	-1.38
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Exo(-) Klenow	Not available.
		10X dNTP Mix	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Buffer DLB	Not available.
		DTT	Not available.
		Stop Solution	Not available.
		Amplification Reaction Buffer	Not available.

Section 9. Physical and chemical properties

	Amplification DNA	Not available.
	Polymerase	
	PBS	Not available.
Auto-ignition temperature	: Nuclease Free Water	Not applicable.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	Exo(-) Klenow	Not available.
	10X dNTP Mix	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
	Buffer DLB	Not available.
	DTT	Not available.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.
	Amplification DNA	Not available.
	Polymerase	
	PBS	Not available.
Decomposition temperature	: Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	Exo(-) Klenow	Not available.
	10X dNTP Mix	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
	Buffer DLB	Not available.
	DTT	Not available.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.
	Amplification DNA	Not available.
	Polymerase	
	PBS	Not available.
Viscosity	: Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	Exo(-) Klenow	Not available.
	10X dNTP Mix	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
	Buffer DLB	Not available.
	DTT	Not available.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Not available.
	Amplification DNA	Not available.
	Polymerase	
	PBS	Not available.

Section 10. Stability and reactivity

Reactivity	: Nuclease Free Water	No specific test data related to reactivity available for this product or its ingredients.
	Random Primers	No specific test data related to reactivity available for this product or its ingredients.
	5X gDNA Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Exo(-) Klenow	No specific test data related to reactivity available for this product or its ingredients.
	10X dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
	Cyanine-3-dUTP	No specific test data related to reactivity available for this product or its ingredients.
	Cyanine-5-dUTP	No specific test data related to reactivity available for this product or its ingredients.
	Buffer DLB	No specific test data related to reactivity available for

Section 10. Stability and reactivity

DTT	this product or its ingredients.
Stop Solution	No specific test data related to reactivity available for this product or its ingredients.
Amplification Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
Amplification DNA Polymerase	No specific test data related to reactivity available for this product or its ingredients.
PBS	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability

: Nuclease Free Water	The product is stable.
Random Primers	The product is stable.
5X gDNA Reaction Buffer	The product is stable.
Exo(-) Klenow	The product is stable.
10X dNTP Mix	The product is stable.
Cyanine-3-dUTP	The product is stable.
Cyanine-5-dUTP	The product is stable.
Buffer DLB	The product is stable.
DTT	The product is stable.
Stop Solution	The product is stable.
Amplification Reaction Buffer	The product is stable.
Amplification DNA Polymerase	The product is stable.
PBS	The product is stable.

Possibility of hazardous reactions

: Nuclease Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
Random Primers	Under normal conditions of storage and use, hazardous reactions will not occur.
5X gDNA Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Exo(-) Klenow	Under normal conditions of storage and use, hazardous reactions will not occur.
10X dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
Cyanine-3-dUTP	Under normal conditions of storage and use, hazardous reactions will not occur.
Cyanine-5-dUTP	Under normal conditions of storage and use, hazardous reactions will not occur.
Buffer DLB	Under normal conditions of storage and use, hazardous reactions will not occur.
DTT	Under normal conditions of storage and use, hazardous reactions will not occur.
Stop Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
Amplification Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Amplification DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
PBS	Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

: Nuclease Free Water	No specific data.
Random Primers	No specific data.
5X gDNA Reaction Buffer	No specific data.
Exo(-) Klenow	No specific data.
10X dNTP Mix	No specific data.
Cyanine-3-dUTP	No specific data.
Cyanine-5-dUTP	No specific data.
Buffer DLB	No specific data.

Section 10. Stability and reactivity

DTT	No specific data.
Stop Solution	No specific data.
Amplification Reaction Buffer	No specific data.
Amplification DNA	No specific data.
Polymerase	
PBS	No specific data.

Incompatible materials	:	☒ Nuclease Free Water	May react or be incompatible with oxidising materials.
		Random Primers	May react or be incompatible with oxidising materials.
		5X gDNA Reaction Buffer	May react or be incompatible with oxidising materials.
		Exo(-) Klenow	May react or be incompatible with oxidising materials.
		10X dNTP Mix	May react or be incompatible with oxidising materials.
		Cyanine-3-dUTP	May react or be incompatible with oxidising materials.
		Cyanine-5-dUTP	May react or be incompatible with oxidising materials.
		Buffer DLB	May react or be incompatible with oxidising materials.
		DTT	May react or be incompatible with oxidising materials.
		Stop Solution	May react or be incompatible with oxidising materials.
		Amplification Reaction Buffer	May react or be incompatible with oxidising materials.
		Amplification DNA	May react or be incompatible with oxidising materials.
		Polymerase	
	PBS	May react or be incompatible with oxidising materials.	

Hazardous decomposition products	:	☒ Nuclease Free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Random Primers	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		5X gDNA Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Exo(-) Klenow	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		10X dNTP Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Cyanine-3-dUTP	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Cyanine-5-dUTP	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Buffer DLB	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		DTT	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Stop Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Amplification Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Amplification DNA	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Polymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		PBS	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Exo(-) Klenow Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Buffer DLB Potassium hydroxide	LD50 Oral	Rat	273 mg/kg	-
Amplification Reaction Buffer Trometamol	LD50 Dermal LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Exo(-) Klenow Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Buffer DLB Potassium hydroxide	Eyes - Moderate irritant	Rabbit	-	24 hours 1 milligrams	-
	Skin - Severe irritant	Guinea pig	-	24 hours 50 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 milligrams	-
Amplification Reaction Buffer Trometamol	Skin - Moderate irritant	Rabbit	-	25 Percent	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	Not applicable.	Respiratory tract irritation
Amplification Reaction Buffer Trometamol	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	<input checked="" type="checkbox"/> Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
	Exo(-) Klenow	Routes of entry anticipated: Oral, Dermal, Inhalation.
	10X dNTP Mix	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
	Buffer DLB	Routes of entry anticipated: Oral, Dermal, Inhalation.
	DTT	Routes of entry anticipated: Oral, Dermal, Inhalation.
	Stop Solution	Not available.
	Amplification Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
	Amplification DNA	Not available.
	Polymerase	
PBS	Not available.	

Potential acute health effects

Eye contact	<input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
	Buffer DLB	Causes serious eye damage.
	DTT	Causes serious eye irritation.
	Stop Solution	No known significant effects or critical hazards.
	Amplification Reaction Buffer	Causes serious eye irritation.
	Amplification DNA	No known significant effects or critical hazards.
	Polymerase	
PBS	No known significant effects or critical hazards.	
Inhalation	<input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
	Buffer DLB	No known significant effects or critical hazards.
	DTT	May cause respiratory irritation.
	Stop Solution	No known significant effects or critical hazards.
	Amplification Reaction Buffer	No known significant effects or critical hazards.
	Amplification DNA	No known significant effects or critical hazards.
	Polymerase	
PBS	No known significant effects or critical hazards.	

Section 11. Toxicological information

Skin contact	:	☑ Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	Causes severe burns.
		DTT	Causes skin irritation.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	Causes skin irritation.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
		PBS	No known significant effects or critical hazards.
Ingestion	:	☑ Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
		DTT	Harmful if swallowed.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
		PBS	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	☑ Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Exo(-) Klenow	No specific data.
		10X dNTP Mix	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
		Buffer DLB	Adverse symptoms may include the following: pain watering redness
		DTT	Adverse symptoms may include the following: pain or irritation watering redness
		Stop Solution	No specific data.
		Amplification Reaction Buffer	Adverse symptoms may include the following: pain or irritation watering redness
		Amplification DNA	No specific data.
		Polymerase	
		PBS	No specific data.
Inhalation	:	☑ Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Exo(-) Klenow	No specific data.
		10X dNTP Mix	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.

Section 11. Toxicological information

	Buffer DLB	No specific data.
	DTT	Adverse symptoms may include the following: respiratory tract irritation coughing
	Stop Solution	No specific data.
	Amplification Reaction Buffer	No specific data.
	Amplification DNA	No specific data.
	Polymerase	No specific data.
Skin contact	: <input checked="" type="checkbox"/> PBS	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	No specific data.
	Exo(-) Klenow	No specific data.
	10X dNTP Mix	No specific data.
	Cyanine-3-dUTP	No specific data.
	Cyanine-5-dUTP	No specific data.
	Buffer DLB	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	DTT	Adverse symptoms may include the following: irritation redness
	Stop Solution	No specific data.
	Amplification Reaction Buffer	Adverse symptoms may include the following: irritation redness
	Amplification DNA	No specific data.
	Polymerase	No specific data.
	PBS	No specific data.
Ingestion	: <input checked="" type="checkbox"/> Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	No specific data.
	Exo(-) Klenow	No specific data.
	10X dNTP Mix	No specific data.
	Cyanine-3-dUTP	No specific data.
	Cyanine-5-dUTP	No specific data.
	Buffer DLB	Adverse symptoms may include the following: stomach pains
	DTT	No specific data.
	Stop Solution	No specific data.
	Amplification Reaction Buffer	No specific data.
	Amplification DNA	No specific data.
	Polymerase	No specific data.
	PBS	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Section 11. Toxicological information

General	:	☑ Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		DTT	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
		PBS	No known significant effects or critical hazards.
Carcinogenicity	:	☑ Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		DTT	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
		PBS	No known significant effects or critical hazards.
Mutagenicity	:	☑ Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		DTT	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
		PBS	No known significant effects or critical hazards.
Teratogenicity	:	☑ Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		DTT	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
		PBS	No known significant effects or critical hazards.

Section 11. Toxicological information

Developmental effects	:	N uclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		DTT	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
	PBS	No known significant effects or critical hazards.	
Fertility effects	:	N uclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	No known significant effects or critical hazards.
		Exo(-) Klenow	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.
		Cyanine-3-dUTP	No known significant effects or critical hazards.
		Cyanine-5-dUTP	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		DTT	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		Amplification Reaction Buffer	No known significant effects or critical hazards.
		Amplification DNA	No known significant effects or critical hazards.
		Polymerase	
	PBS	No known significant effects or critical hazards.	

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
N uclease Free Water Oral	625 mg/kg
DTT Oral	2000 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
N uclease Free Water Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Buffer DLB Potassium hydroxide	Acute LC50 80 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
DTT (R*,R*)-1, 4-Dimercaptobutane-2,3-diol	Acute LC50 27000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
Amplification Reaction Buffer Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours

Section 12. Ecological information

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> Nuclease Free Water Nuclease Free water	-	100 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> Nuclease Free Water Nuclease Free water	-	-	Readily
Buffer DLB Potassium hydroxide	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> Nuclease Free Water Nuclease Free water	-1.38	-	low
Exo(-) Klenow Glycerol	-1.76	-	low
Amplification Reaction Buffer Trometamol	-1.56	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

6

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Europe	: Not determined.
Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: <input checked="" type="checkbox"/> Not determined.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 30/06/2017

Date of previous issue : 18/11/2014.

Version : 2

Key to abbreviations

ADG = Australian Dangerous Goods
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 NOHSC = National Occupational Health and Safety Commission

Section 16. Any other relevant information

SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

Classification	Justification
Buffer DLB Acute Tox. 4, H302 Skin Corr. 1, H314 Eye Dam. 1, H318	Calculation method On basis of test data On basis of test data
DTT Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method
Amplification Reaction Buffer Skin Irrit. 2, H315 Eye Irrit. 2A, H319	Calculation method Calculation method

References : Not available.

📄 Indicates information that has changed from previously issued version.

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